

**EUROPEAN PATENT APPLICATION**

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(C07D487/08,209:00,209:00),  
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Applicant: Bristol-Myers Company  
345 Park Avenue  
New York New York 10154(US)

Inventor: DI Cesare, Pierre  
53, Rue Rene Bazin  
F-77100 Meaux(FR)  
Inventor: Jacquet, Jean-Pierre  
Chemin de St-Thibault  
F-45240 Menestreau-en-Villette(FR)  
Inventor: Essiz, Munir  
4 Mail F.Carcla Lorca  
F-93160 Nolsy Le Grand(FR)  
Inventor: Remuzon, Philippe  
25, Rue de Crimée  
F-75019 Paris(FR)  
Inventor: Bouzard, Daniel  
11 Rue Amlati  
F-95130 Franconville(FR)  
Inventor: Weber, Abraham  
4 Avenue Herbillon  
F-94160 Saint-Mande(FR)

Representative: Kinzebach, Werner, Dr.  
Patentanwälte Reitzstötter, Kinzebach und  
Partner Sternwartstrasse 4 Postfach 86 06 49  
D-8000 München 86(DE)

**EP 0 266 576 A3**

1-Tert-alkyl-substituted naphthyridine and quinoline carboxylic acids as antibacterial agents.

There are disclosed new naphthyridine-and quinoline-carboxylic acids having a 1-tertiary-alkyl substituent, compositions containing them, and their use in treating bacterial infections in warm-blooded

animals. Also disclosed are novel amines and intermediates used in the preparation of the naphthyridine- and quinoline-carboxylic acids.



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
X	DE-A-3 509 546 (BAYER) * Claims 1-4, page 53, line 21 - page 55, line 19; page 64, line 25 - page 68, line 29 * --	1-7,21	C 07 D 215/56 C 07 D 401/04 C 07 D 471/04 C 07 D 471/08
X	GB-A-2 093 018 (KYORIN) * Page 1, lines 36-38; claim 8 * --	1-7,21	C 07 D 487/08 C 07 D 519/00 A 61 K 31/47
Y,D	EP-A-0 153 163 (WARNER-LAMBERT) * Page 3, line 16 - page 8, line 4; page 27, lines 8-12; page 79, lines 9-22; page 81, lines 1-14; page 82, lines 8-27 * --	1-21	A 61 K 31/435 A 61 K 31/495
Y	US-A-4 578 473 (J.M. DOMAGALA) * Column 1, line 49 - column 4, line 17 * --	1-7,21	TECHNICAL FIELDS SEARCHED (Int. Cl. 4) C 07 D 215/00 C 07 D 401/00 C 07 D 471/00 C 07 D 487/00 C 07 D 519/00 A 61 K 31/00
Y	EP-A-0 004 279 (BAYER) * Page 16, line 4 - page 17, line 20; page 27, table 2, example 25 * & US-A-4 284 629 (Cat. D) --	1-21	
X	US-A-3 221 015 (G. CIGNARELLA) * Claims 1,2 * --	28	
X,D	EP-A-0 159 174 (WARNER-LAMBERT) * Page 7, line 1 - page 9, line 25; page 38; claim 1 * --	28	
The present search report has been drawn up for all claims ./. .			
Place of search The Hague		Date of completion of the search 28-11-1988	Examiner BRENNAN
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			



### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

### X LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims 1-27 excluding R' = 1-methylcyclobutyl, 2-propenyl or 1-adamantyl
2. Claims 1-6, 21-26 as far as R' = 1-methylcyclobutyl
3. Claims 1-6, 21-26 as far as R' = 2-propenyl
4. Claims 1-4, 21-26 as far as R' = 1-adamantyl
5. Claim 28: Intermediate not being characterising part of first subject

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
A	<p>JOURNAL OF ORGANIC CHEMISTRY, vol. 31, no. 4, April 1966, pages 1059-1062</p> <p>P.S. PORTOGHESE et al.: "Bicyclic bases. Synthesis of 2,5-diazabicyclo(2.2.1)heptanes"</p> <p>* Abstract; page 1060, column 2, lines 8-12 *</p> <p>-----</p>	28	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone</p> <p>Y : particularly relevant if combined with another document of the same category</p> <p>A : technological background</p> <p>O : non-written disclosure</p> <p>P : intermediate document</p> <p>T : theory or principle underlying the invention</p> <p>E : earlier patent document, but published on, or after the filing date</p> <p>D : document cited in the application</p> <p>L : document cited for other reasons</p> <p>&amp; : member of the same patent family, corresponding document</p>			



European Patent  
Office

**PARTIAL EUROPEAN SEARCH REPORT**  
under Rule 46, paragraph 1 of the European Patent  
Convention

Application number

EP 87 11 4686

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	DE-A-3 509 546 (BAYER) * Claims 1-4; page 53, line 21 - Page 55, line 19; page 64, line 25 - page 68, line 29 *	1-7, 21	C 07 D 215/56 C 07 D 401/04 C 07 D 471/04 C 07 D 471/08 C 07 D 487/08 C 07 D 519/00
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Y	US-A-4 578 473 (J.M. DOMAGALA) * Column 1, line 49 - column 4, line 17 *	1-7, 21	
Y	EP-A-0 004 279 (BAYER) * Page 16, line 4 - page 17, line 20; page 27, table 2, example 25 *	1-21	
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<p>The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:</p> <ol style="list-style-type: none"><li>1. Claims 1-27 excluding R' = 1-methylcyclobutyl, 2-propenyl and 1-adamantyl</li><li>2. Claims 1-6, 21-26 as far as R' = 1-methylcyclobutyl</li><li>3. Claims 1-6, 21-26 as far as R' = 2-propenyl</li><li>4. Claims 1-4, 21-26 as far as R' = 1-adamantyl</li><li>5. Claim 28: Intermediate not being characterising part of first subject.</li></ol> <p>The present partial European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims.</p>			
Place of search		Date of completion of the search	Examiner
The Hague		01-06-1988	BRENNAN
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